

CLAIMS

What is claimed is:

1. In a wireless network system comprising at least one access element for 5 communication with at least one remote client element, wherein the at least one access element is operative to transmit neighbor messages, and at least one central control element for controlling and managing wireless connections between access elements and remote client elements, a method facilitating the initialization and configuration of an access element, comprising
 - 10 monitoring for wireless neighbor messages from at least one neighboring access element, the neighbor messages identifying at least one central control element and a corresponding computer network address;
 - selecting a central control element;
 - transmitting, using a corresponding computer network address, a request to 15 the selected central control element.
2. The method of claim 1 further comprising exchanging configuration information with the selected central control element.
- 20 3. The method of claim 1 further comprising
 - transmitting discovery requests over a wired computer network;
 - monitoring for discovery responses to the discovery requests, each discovery response identifying a central control element.
- 25 4. The method of claim 3 wherein the selecting step comprises selecting a central control element identified in a wireless neighbor message or a discovery response.
5. The method of claim 3 wherein the selecting comprises selecting a central control element identified in a wireless neighbor message and a discovery response.

6. The method of claim 2 wherein the information includes the computer network addresses of the central control elements in an administrative group associated with the selected central control element.

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7. The method of claim 6 further comprising

after detecting the failure of the selected central control element,
selecting a second central control element from the administrative group;

10 using the computer network address of the selected second central control element to exchange configuration information with the selected second control element.

8. The method of claim 2 wherein the exchanged information allows for operation 15 in an access point mode under the control of the selected central control element.

9. The method of claim 8 further comprising operating in an access point mode under control of the selected central control element.

20 10. The method of claim 9 further comprising

after detecting the failure of the selected central control element,
selecting a second central control element from the administrative group;
using the computer network address of the selected second central 25 control element to exchange information with the selected second control element.

11. In a wireless network system comprising at least one access element for communication with at least one remote client element, and at least one central control element for controlling and managing wireless connections between access

elements and remote client elements, a method facilitating the initialization and configuration of an access element, comprising

detecting at least one neighboring access element;

5 receiving at least one message from the at least one neighboring access element, the at least one message identifying at least one central control element and a corresponding computer network address;

selecting a central control element;

transmitting, using a corresponding computer network address, a request to the selected central control element.

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12. The method of claim 11 wherein the at least one message is a neighbor message.

13. The method of claim 11 further comprising

15 establishing a wireless connection with a detected neighboring access element to receive the at least one message.

14. An apparatus for wireless communication with at least one remote client element and for communication with a central control element, comprising

20 a wireless transmit/receive unit for wireless communication with at least one remote client element;

a network interface for communication with a central control element over a computer network;

25 an access point module controlling the wireless transmit/receive unit and the network interface, wherein the access point module is operative to:

establish and maintain, in conjunction with a central control element, wireless connections with remote client elements,

receive control data from a central control element; and

a configuration module operative to:

monitor for wireless neighbor messages from at least one neighboring access element, the neighbor messages identifying at least one central control element and a corresponding computer network address;

select a central control element; and

5 transmit, using a corresponding computer network address, a request to the selected central control element.

15. The apparatus of claim 14 wherein the configuration module is further operative to exchange configuration information with the selected central control 10 element.

16. The apparatus of claim 14 wherein the configuration module is further operative to

transmit discovery requests over a wired computer network; and
15 monitor for discovery responses to the discovery requests, each discovery response identifying a central control element.

17. The apparatus of claim 16 wherein the configuration module is operative to select a central control element from the central control elements identified in 20 wireless neighbor messages and discovery responses.

18. The apparatus of claim 14 wherein the access point module is operative to tunnel wireless traffic associated with remote client elements to a central control element.

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19. The apparatus of claim 14 wherein the access point module is operative to switch to a neighbor message mode at periodic intervals to transmit neighbor messages,

receive neighbor messages from neighboring wireless access devices,
and
process received neighbor messages.

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